

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE INTERSECTION OF MD 144 (FREDERICK ROAD) AT THE I-695 OUTER LOOP RAMP IN BALTIMORE COUNTY.

INTERSECTION OPERATION

A LOCAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THIS INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 3 NEMA PHASES. EASTBOUND AND WESTBOUND MD 144 (FREDERICK ROAD) SHALL OPERATE CONCURRENTLY, WHILE THE SIDE STREET MOVEMENT SHALL OPERATE ALONE. VIDEO DETECTION SHALL BE INSTALLED FOR ACTIVATION OF THE WESTBOUND MD 144 (FREDERICK ROAD) LEFT TURN PHASE, FOR THE I-695 RAMP PRESENCE DETECTION, FOR THE I-695 RAMP QUEUE DETECTION, AND FOR EASTBOUND AND WESTBOUND MD 144 (FREDERICK ROAD) ADVANCE DETECTION.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. RANDALL SCOTT, ASSISTANT DISTRICT ENGINEER-TRAFFIC  
PHONE: (410) 321-2781  
MS. SUE POPE, UTILITY ENGINEER  
PHONE: (410) 321-2841  
MR. DANIEL WITT, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
PHONE: (410) 321-2821  
MR. STEVE MARCISZEWSKI, ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (410) 321-2761  
MR. RICHARD L. DAFF, SR., CHIEF TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630  
MR. EDWARD RODENHIZER, SIGNAL OPERATIONS CHIEF  
PHONE: (410) 787-7650

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR USING THE MSHA STANDARD PLATES FOR TRAFFIC CONTROL.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

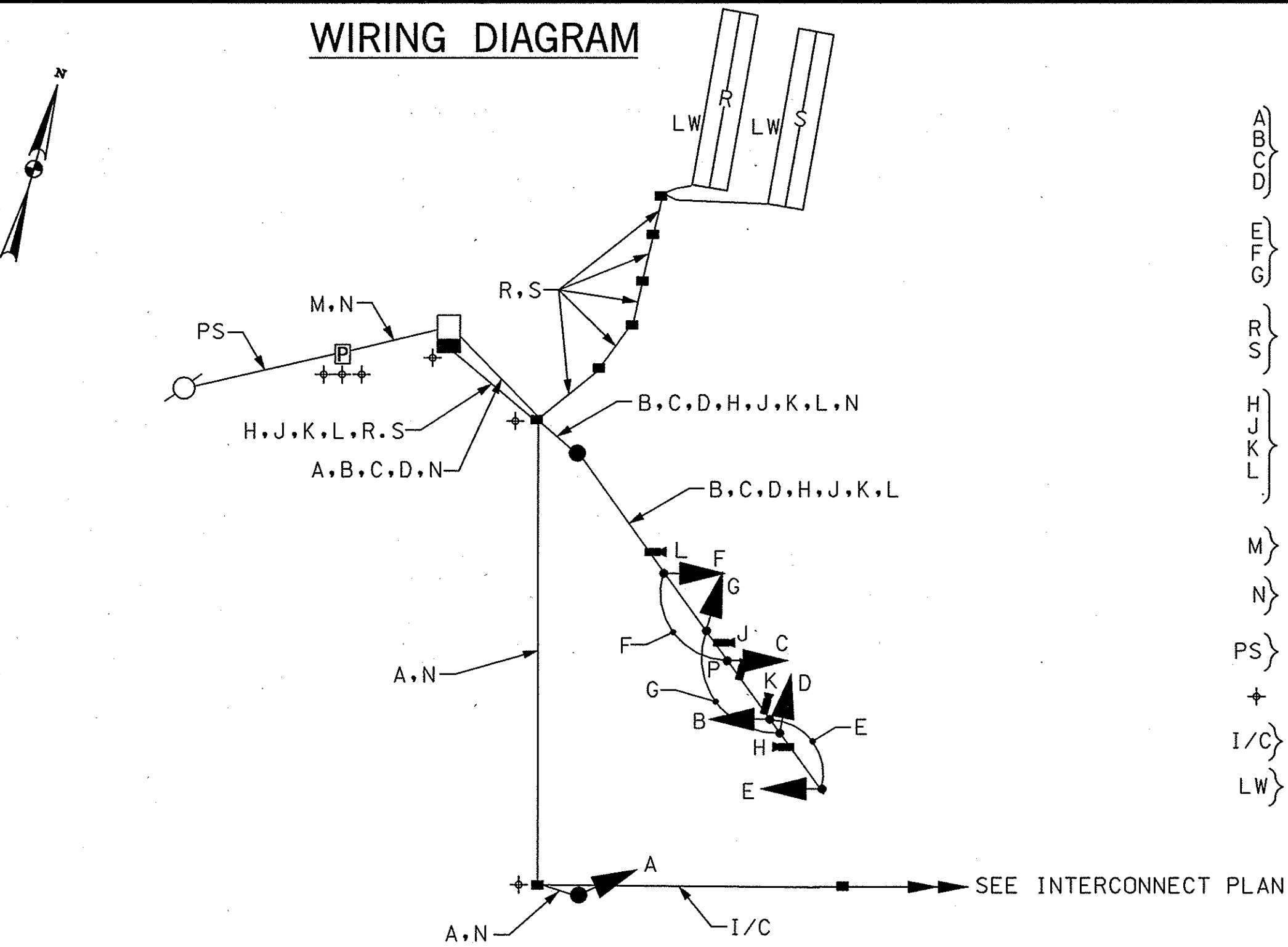
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
9001	(CONT/CAB/ADD) DETECTOR RACK POWER SUPPLY	EA	1
9016	4 CHANNEL DETECTOR AMPLIFIER	EA	1
9042	CONTROLLER ASC II WITH TELEMETRY	EA	1
9044	CONTROLLER CABINET, SIZE 6	EA	1
9086	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS	EA	1
9570	SHEET ALUMINUM GROUND MOUNT SIGNS CONSISTING OF: W3-3 (36"X36")	SF	18
		EA	2
9571	SHEET ALUMINUM MAST ARM/POLE MOUNT SIGNS CONSISTING OF: R3-1 (30"X30") MAST ARM MOUNT	SF	38
		EA	1
	R3-2 (30"X36") MAST ARM MOUNT	EA	1
	(6'X4') POLE MOUNTED	EA	1

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	1
2002	TEST PIT EXCAVATION	CY	2
5006	24 INCH WHITE, HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING	LF	90
6005	4 INCH CONCRETE SIDEWALK	SF	25
8001	CONCRETE FOUNDATION	CY	8
8003	12 INCH RED OR GREEN LED SIGNAL HEAD SECTION	EA	14
8004	12 INCH YELLOW LED SIGNAL HEAD SECTION	EA	8
8007	8 INCH RED OR GREEN LED SIGNAL HEAD SECTION	EA	2
8013	CONTROL CABLE 100 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	2
8014	CONTROL CABLE 200 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	2
8027	PED POLE - ANY SIZE	EA	1
8029	REMOVE AND DISPOSE MATERIALS AND EQUIPMENT PER ASSIGNMENT	EA	1
8043	WOOD SIGN SUPPORTS (4"X6")	LF	36
8044	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	100
8050	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	85
8051	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	480
8052	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	20
8053	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	80
8056	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	LF	60
8057	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE	LF	10
8058	METERED SERVICE PEDESTAL	EA	1
8061	ELECTRICAL CABLE - 1 CONDUCTOR, NO 4 AWG-THHN/THWN	LF	30
8067	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	8
8069	INSTALL GROUND MOUNTED SIGN	SF	22
8070	INSTALL OVERHEAD SIGN	SF	14
8071	VIDEO DETECTION CAMERA	EA	4
8081	STEEL POLE WITH SINGLE 70 FOOT MAST ARM	EA	1
8083	12 PAIR COMMUNICATION CABLE, JELLY FILLED UNDERGROUND	LF	700
8091	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	6
8098	ELECTRICAL CABLE - 2 CONDUCTOR ALUMINIUM SHIELDED	LF	1000
8101	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	70
8102	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	540
8104	LOOP WIRE ENCASED IN FLEXIBLE TUBING NO. 14 AWG	LF	850
8105	SAW CUT FOR SIGNAL - LOOP DETECTOR	LF	170
8112	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
NEG.	8 INCH YELLOW LED SIGNAL HEAD SECTION	EA	1
<del>77-NEG.</del>	<del>BAND SIGN TO SUPPORT</del>	<del>EA</del>	<del>1</del>

NOTE: REMOVAL OF EXISTING S/W ID INCIDENTAL TO THE NEW SIDEWALK AS PER SHA'S 603.04 2001 SPECIFICATIONS SECTION

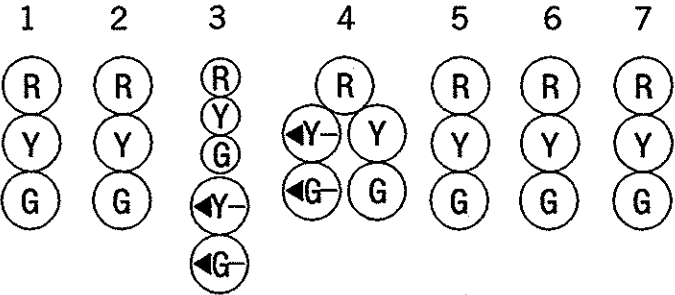
WIRING DIAGRAM



KEY

- A,B,C,D } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)  
E,F,G } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)  
R,S } 2 CONDUCTOR ELECTRICAL CABLE ALUMINIUM SHIELDED  
H,J,K,L } VIDEO DETECTION CABLE  
M } 2 WIRE 1 CONDUCTOR (NO. 4 AWG)  
N } 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE  
PS } POWER SERVICE UNDERGROUND  
+ } GROUND ROD  
I/C } INTERCONNECT  
LW } LOOP WIRE

PHASE CHART



PHASE 2 AND 5	R	R	←GG	←GG	G	R	R	←
2 AND 5 CHANGE	R	R	←YG	←YG	G	R	R	←
PHASE 2 AND 6	G	G	G	G	G	R	R	←
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	←
PHASE 4 AND 8	R	R	R	R	R	G	G	↓
4 AND	R	R	R	R	R	Y	Y	↓
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	↓



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

**MD 144 (FREDERICK ROAD) &  
I-695 OUTER LOOP RAMP**  
CATONSVILLE, MARYLAND

TRAFFIC SIGNAL PLAN

SCALE 1"=20' DATE 07/26/05 CONTRACT NO. AT7175185

DESIGNED BY J. PALADUGU COUNTY BALTIMORE  
DRAWN BY J. PALADUGU LOGMILE 03014404.04  
CHECKED BY S. RENZI/J. WEAVER T.I.M.S. NO. 6650  
F.A.P. NO. N/A TOD NO.

DRAWING NO. TS-4381

SHEET NO. 02 OF 03



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PLOTTED: FRIDAY, JULY 29, 2005 AT 03:04 PM  
FILE: R:\2001\23 STV\TASK 21\DWG\PSG-N001.MD144.DGN